

STATEMENT OF BASIS (AI No. 31120)

for draft Louisiana Pollutant Discharge Elimination System permit No. LA0103179 to discharge to waters of the State of Louisiana.

THE APPLICANT IS: GEO Heat Exchangers, LLC
St. Gabriel Facility
PO Box 750
St. Gabriel, LA 70776

ISSUING OFFICE: Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

PREPARED BY: Maxon Graham

DATE PREPARED: 6 December 2007

1. PERMIT STATUS**A. Reason For Permit Action:**

Permit reissuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term

B. NPDES permit - NPDES permit effective date: N/A
NPDES permit expiration date: N/A
EPA has not retained enforcement authority.

C. LPDES permits – LPDES permit effective date: 1 May 2003
LPDES permit expiration date: 30 April 2008

D. Date Application Received: 2 November 2007

2. FACILITY INFORMATION**A. FACILITY TYPE/ACTIVITY –** Heat exchanger fabrication and repair, some hydrostatic testing

GEO Heat Exchangers is a fabrication and repair facility for industrial heat exchangers. Equipment that is shipped to the site for repair is cleaned prior to arrival. The facility operations include machining, cutting, welding and some sandblasting in preparation for fabrication and repair. The facility uses approximately 3500 gpd from municipal water supply. All wastewater from the facility goes through the sanitary treatment plant, except for stormwater from the facility. All stormwater discharges for this facility will be covered under a SWPPP per LAC 33.IX.2511.B.14.

B. FEE RATE

1. Fee Rating Facility Type: minor
2. Complexity Type: II
3. Wastewater Type: III
4. SIC code: 3443

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C. LOCATION - at the junction of St. Gabriel Avenue and Cypress Drive, St. Gabriel, Iberville Parish

Latitude 30° 15' 18", Longitude 91° 4' 34"

3. OUTFALL INFORMATION

Outfall 001

Discharge Type: treated sanitary, hydrostatic test, limited washdown with no detergents, compressor condensate, and miscellaneous small volume shop wastewaters, (buckets used for cooling metal after welding)

Treatment: mechanical treatment plant with aeration and chlorination

Location: at the point of discharge from the treatment plant

Flow: 3200 gpd – application states that effluent discharge has increased from 2500 gpd during the previous permit cycle.

Discharge Route: via local drainage thence into Bayou Braud

4. RECEIVING WATERS

STREAM - via local drainage thence into Bayou Braud

BASIN AND SEGMENT - Lake Pontchartrain Basin, Segment 040201

DESIGNATED USES -

- a. primary contact recreation
- b. secondary contact recreation
- c. propagation of fish and wildlife

5. TMDL STATUS

303(d)/TMDL Status:

Subsegment 040201, Bayou Manchac – headwaters to Amite River, is listed on LDEQ's Final 2004 303(d) List as impaired for Ammonia, Phosphorus, Nitrogen, Organic enrichment, low DO, Pathogen Indicators, Chlorides, Sulfates and TDS. To date no TMDLs have been completed for this waterbody. A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by a TMDL. Until completion of TMDLs for the Lake Ponchartrain Basin, those suspected causes for impairment which are not directly attributed to the Metal Products and Machinery point source category have been eliminated in the formulation of effluent limitations and other requirements of this permit. Additionally, suspected causes of impairment which could be attributed to pollutants which were not determined to be discharged at a level which would cause, have the reasonable potential to cause or contribute to an excursion above any present state water quality standard were also eliminated.

Organic Enrichment/low DO

LDEQ's position, as supported by the ruling in the lawsuit regarding water quality criteria for nutrients (Sierra Club v. Givens, 710 So.2d 249 (La. App. 1st Cir. 1997), writ denied, 705 So.2d 1106 (La. 1998)), is that when oxygen-demanding substances are controlled and limited in order to ensure that the dissolved oxygen criterion is supported, nutrients are also controlled and limited. LAC 33:IX.2707.C.f.iii allows the establishment of effluent limitations based on an indicator parameter for

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the pollutant of concern. LDEQ's consistent approach to controlling nutrients where the WQMP does not otherwise require specific nutrient limitations is achieved by limiting the discharge of oxygen-demanding substances through a BOD₅ limitation. Compliance with the BOD₅ limitation as the indicator parameter will result in the control of nutrients from the discharge sufficient to attain and maintain the applicable water quality standard. Effluent monitoring of the indicator parameter as conducted by the permittee in accordance with Part I of the permit in addition to LDEQ's ambient water quality monitoring program will allow for further evaluation by the Department to determine the effectiveness of the limitation. The reopener clause located in Part II of the final permit allows the Department to modify or revoke and reissue the permit if the limitations as set on the indicator parameter are shown to no longer attain and maintain applicable water quality standards. Dissolved oxygen will be controlled by the BOD₅ and TOC limit in this permit.

Nutrients (phosphorus, nitrogen, ammonia)

The discharge from this facility is a potential source of nitrogen, phosphorus and ammonia. Due to the small amount of discharge, this discharge should not cause or contribute to further impairment of the receiving stream. Since increases in Phosphorus input are inversely related to Dissolved Oxygen (through algal growth and decay), the BOD₅ limit should be sufficient to control Phosphorus inputs to the receiving stream.

Pathogen Indicators

The treated sanitary wastewater discharges have the potential to discharge pollutants associated with the Pathogen Indicators (Fecal Coliform). The Pathogen Indicators impairment shall be addressed through the Fecal Coliform parameter.

This facility has the potential to discharge pollutants associated with the phosphorus, nitrogen, ammonia, organic enrichment/low DO, and pathogen indicator impairments. However, due to the small flow from this facility, compliance with the limitations established in the permit should not result in the discharge of pollutant concentrations which would cause or contribute to further impairment of water quality standards. Chlorides, Sulfates and TDS impairments have been attributed to land clearance (land development and redevelopment) therefore limitations for these parameters shall not be included at this time.

6. PROPOSED EFFLUENT LIMITS

BASIS - See Rationale below.

7. COMPLIANCE HISTORY/COMMENTS

A. Compliance History

1. WQMD: The company was issued an amended compliance order, WE-C-03-0575A issued September 16, 2005, based on an inspection around November 14, 2002 and a file review for this facility due to noncompliance with LA0103179. Specifically, the facility was not reporting as required on Discharge Monitoring Reports as required by the permit LA0103179.

2. DMR Review/Excursions -

Date	Parameter	Outfall	Reported Value	Permit Limits
01/01/07-03/31/07	BOD	001	64.8 mg/L	45 mg/L
04/01/06-06/30/06	TOC	001	55.0 mg/L	50 mg/L

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Date	Parameter	Outfall	Reported Value	Permit Limits
01/01/06-03/31/06	Oil and Grease	001	30.6 mg/L	15 mg/L
04/01/05-06/30/05	Fecal Coliform	001	> 2000 colonies/100 mL	400 colonies/100 mL
04/01/05-06/30/05	BOD	001	55.6 mg/L	45 mg/L
09/01/04-12/31/04	TOC	001	76.4 mg/L	50 mg/L
04/01/04-06/30/04	Fecal Coliform	001	> 2000 colonies/100 mL	400 colonies/100 mL

- there were no DMRs available for review for the 2nd and 3rd quarter of 2007.

8. EXISTING EFFLUENT LIMITS

Parameter	Limitation			Monitoring Frequency
	Monthly Average	Weekly Average	Daily Maximum	
Flow	Report	Report	---	Quarterly estimate
TSS	---	45 mg/L	---	quarterly
Oil and Grease	---	---	15 mg / L	quarterly
BOD ₅	---	45 mg/L	---	quarterly
TOC	---	---	50 mg/L	quarterly
Fecal Coliform	---	400 colonies/100 mL	---	quarterly
pH – Allowable Range (su)	6.0 (instant. min.) to 9.0 (instant. max.)			quarterly

9. ENDANGERED SPECIES

The receiving waterbody, Subsegment 040201 of the Lake Pontchartrain Basin is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated October 24, 2007 from Boggs (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

10. HISTORIC SITES

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

11. TENTATIVE DETERMINATION

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in the application.

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12. PUBLIC NOTICES

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

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Rationale for GEO Heat Exchangers, LLC

1. **Outfall 001** - treated sanitary, hydrostatic test, limited washdown with no detergents, compressor condensate, and miscellaneous small volume shop wastewaters (estimated flow is 3000 gpd)

Parameter	Limitation		Reference
	Monthly Average	Weekly Average	
Flow	Report	Report (daily maximum)	LAG670000; similar discharges, previous permit
TSS	---	45 mg/L	LAG530000; similar discharges, previous permit
Oil and Grease	---	15 mg/L (daily maximum)	LAG670000; similar discharges, previous permit
BOD	---	45 mg/L	LAG530000; similar discharges, previous permit
TOC	---	50 mg/L (daily maximum)	LAG670000; similar discharges, previous permit
Fecal Coliform	---	400 colonies /100 mL	LAG530000; similar discharges, previous permit
pH – Allowable Range (s.u.)	6.0 (min)	9.0 (max)	LAG670000; similar discharges, previous permit

Treatment: None

Monitoring Frequency: quarterly for all parameters

Limits Justification: Limits and monitoring frequencies are based on BPJ, current guidance for similar discharges from other facilities, the Class I Sanitary General Permit LAG530000 and the Hydrostatic Test Wastewater General Permit, LAG670000, requirements for discharges from pipes, vessels and tanks which have been in service. EPA Guidelines for Metal Products and Machinery (40 CFR Part 438) are applicable; however, more stringent state requirements are being placed in the permit.

BPJ Best Professional Judgement
 su Standard Units

NOTE

For outfalls containing concentration limits, the usage of concentration limits is based on BPJ for similar outfalls since the flow is variable and estimated.

STORM WATER POLLUTION PREVENTION PLAN (SWP3) REQUIREMENT

A SWP3 is included in the permit because in accordance with LAC 33:IX.2511.A.1, storm water discharges shall not be required to obtain an LPDES permit "... except... discharges associated with industrial activity." In accordance with LAC 33:IX.2511.B.14.a-k, facilities classified as SIC code 3443 are considered to have storm water discharges associated with industrial activity.

The SWP3 shall be prepared, implemented, and maintained within (6) months of the effective date of the final permit. The plan should identify potential sources of storm water pollution and ensure the implementation of practices to prevent and reduce pollutants in the storm water discharges associated with industrial activity at the facility (see Narrative Requirements for the AI).